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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/414,996	10/07/1999	CHARLES SLATER	CISCO-1341	4137

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DAVID B RITCHIE  
D'ALESSANDRO AND RITCHIE  
P O BOX 640640  
SAN JOSE, CA 951640640

EXAMINER

FOX, JAMAL A

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 04/02/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/414,996

Applicant(s)

SLATER, CHARLES

Examiner

Jamal A Fox

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 January 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-9 and 16-17 is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-15 and 18-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No.5,150,464 to Sidhu et al. Referring to claim 1, Sidhu et al. discloses a method for detecting the path to a first network device [col. 7 lines 25-48] receiving a data packet containing a hop count [col. 13 lines 37-48], a destination Ethernet address corresponding to said first network device [col. 7 lines 25-48], and a source Ethernet address corresponding to a second network device [col. 7 lines 25-48]; modifying said hop count to form a modified data packet [col. 13 lines 37-48], and examining said destination Ethernet address to identify one or more ports on a network device receiving said data packet to forward information to said destination Ethernet address [col. 13 lines 8-27]; and forwarding said modified data packet through said ports [col. 13 lines 20-27].

Referring to claim 2, Sidhu et al. discloses the method of claim 1 where the hop count is not modified if the destination Ethernet address is the same as the Ethernet address of the Ethernet address of the network device receiving the data packet. It is inherent that the hop count is not modified if the destination Ethernet address is the

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same as the Ethernet Address of the network device receiving the data packet because if the destination network is the same as the receiving data packet, then the packet does not have anywhere to go, thus the hop count is not modified.

Referring to claim 3, Sidhu et al. the method for detecting the path to a first network device [col. 7 lines 25-48], comprising the steps of: transmitting from a second network device a data packet containing a hop count [col. 13 lines 37-48], a destination Ethernet address corresponding to said first network device [col. 7 lines 25-48], and a source Ethernet address corresponding to said second network device [col. 7 lines 25-48]; receiving in a third network device said data packet [this is inherent because the number of hops or internet routers a packet may traverse in the preferred embodiment is limited to 16 (see col. 13 lines 46-48)], modifying said hop count to form a modified data packet [col. 13 lines 37-48], and examining said destination Ethernet address to identify one or more ports on said third network device to forward information to said destination Ethernet address [col. 13 lines 8-27]; and forwarding said modified data packet from said third network device through said ports [col. 13 lines 20-27].

Referring to claim 4, Sidhu et al. discloses the method of claim 3, where the third network device modifies the hop count in the data packet before forwarding the modified data packet [col. 13 lines 28-48]. It doesn't matter which network device modifies the hop count, all of the network devices modify the hop count in the data packet before forwarding the modified data packet. The hop count is incremented by one each time the packet traverses a router.

Referring to claim 5, Sidhu et al. discloses an apparatus for detecting the path to other network devices [Fig. 8], comprising: discovery protocol logic for receiving, processing, and sending discovery protocol packets to neighboring network devices [col. 13 lines 14-28]; packet redirection logic for examining the hop count [col. 13 lines 8-27], source address [col. 7 lines 25-48], and destination address field [col. 7 lines 25-48] of Ethernet packets under control of a configuration and management interface and for forwarding said Ethernet packets to other network devices in accordance with said source and destination addresses [col. 7 lines 25-48]. In general discovery protocol logic is used to discover paths to other network devices. It can be used to obtain protocol addresses of neighboring devices and discover the platform of those devices. It also can be used to show information about interfaces. All of which is disclosed in Sidhu et al. [col. 13 lines 10-28].

Referring to claim 6, Sidhu et al. discloses an apparatus of claim 5, further comprising logic for transmitting a hop probe message containing an initial hop count [col. 13 lines 40-45], the destination Ethernet address of the desired station [col. 7 lines 25-48], and the source address of said apparatus in the source address field [col. 7 lines 25-48]. A hop probe message is a field that contains a hop count, a destination Ethernet address, and a source Ethernet address all of which are disclosed in Sidhu et al. [col. 13 lines 40-45 and col. 7 lines 25-48 respectively].

Referring to claim 7, Sidhu et al. discloses a program storage device [Fig. 2] readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for detecting the path to a first network device [Fig. 8,

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reference sign 102], the method comprising: transmitting from a second network device a data packet containing a hop count [col. 13 lines 20-27], a destination Ethernet address corresponding to said first network device [col. 7 lines 25-48], and a source Ethernet address corresponding to said second network device [col. 7 lines 25-48]; receiving in a third network device [Fig. 8] said data packet [col. 7 lines 25-48], modifying said hop count to form a modified data packet [col. 13 lines 37-48], and examining said destination Ethernet address to identify one or more ports on said third network device to forward information to said destination Ethernet address [col. 13 lines 8-27]; and forwarding said modified data packet from said third network device through said ports [col. 13 lines 20-27].

Referring to claim 18, Sidhu et al. discloses a cluster of network devices [Fig. 8], comprising: a first network device [Fig. 8, reference sign 801] in said cluster capable or receiving a data packet containing a hop count, a destination Ethernet address corresponding to a second network device [Fig. 8, reference sign 802] in said cluster to which a path is to be determined, and a source Ethernet address corresponding to a third network device [Fig. 8, reference sign 803] in said cluster, wherein said first network modifies said hop count to form a modified data packet [col. 13 lines 37-48], examines said destination Ethernet address to identify one or more ports on said first network device to forward information to said destination Ethernet address [col. 13 lines 8-27]; and forwards said modified data packet through said port or ports [col. 13 lines 20-27].

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Referring to claim 19, Sidhu et al. discloses the cluster of network devices according to claim 18, wherein said first network device does not modify said hop count if said destination Ethernet address is the same as the Ethernet address of said first network device [see Fig. 8]. It is inherent that the hop count will not be modified because the packet will not be forwarded or the packet will be discarded [col. 13 lines 20-46].

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-15 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sidhu et al. in view of Kracht. Referring to claim 10, Sidhu et al. discloses the method according to claim 1, but does not teach of the first network device being a LAN switch. Kracht discloses the first network device being a LAN switch in [Fig. 1]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included the first network device as a LAN switch to Sidhu et al. in order to improve bandwidth by separating collision domains and selectively forwarding traffic to the appropriate segments.

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Referring to claim 11, Sidhu et al. discloses the method according to claim 3, but does not teach of the network device being a LAN switch [see Fig. 1]. Kracht discloses the network device being a LAN switch in [Fig. 1]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included a network device as LAN switch to Sidhu et al. in order to improve bandwidth by separating collision domains and selectively forwarding traffic to the appropriate segments.

Referring to claim 12, Sidhu et al. discloses the method according to claim 3, but does not teach of the second network device being a LAN switch. Kracht discloses the second network device being a LAN switch in [Fig. 1]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included a second network device as a LAN switch to Sidhu et al. in order to improve bandwidth by separating collision domains and selectively forwarding traffic to the appropriate segments.

Referring to claim 13, Sidhu et al. discloses the method according to claim 3, but does not teach of the third network device being a LAN switch. Kracht discloses the third network device being a LAN switch in [Fig. 1]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included a third network device as a LAN switch to Sidhu et al. in order to improve bandwidth by separating collision domains and selectively forwarding traffic to the appropriate segments.



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Referring to claim 14, Sidhu et al. discloses the apparatus according to claim 5, but does not teach of the apparatus being a LAN switch. Kracht discloses the apparatus being a LAN switch in [Fig. 1]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included the apparatus being a LAN switch to Sidhu et al. in order to improve bandwidth by separating collision domains and selectively forwarding traffic to the appropriate segments.

Referring to claim 15, Sidhu et al. discloses the apparatus according to claim 6, but does not teach of the apparatus being a LAN switch. Kracht discloses the apparatus being a LAN switch in [Fig. 1]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included the apparatus being a LAN switch to Sidhu et al. in order to improve bandwidth by separating collision domains and selectively forwarding traffic to the appropriate segments.

Referring to claim 20, Sidhu et al. discloses the cluster of network devices, according to claim 18, but does not teach of the first network device being a LAN switch. Kracht discloses the first network device being a LAN switch in [Fig. 1]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included the first network device being a LAN switch to Sidhu et al. in order to improve bandwidth by separating collision domains and selectively forwarding traffic to the appropriate segments.

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Referring to claim 21, Sidhu et al. discloses the cluster of network devices according to claim 20, but does not teach of the second and third network devices being LAN switches. Kracht discloses the second and third network devices as being a LAN switches in [Fig. 1]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included the second and third network devices as LAN switches to Sidhu et al. in order to improve bandwidth by separating collision domains and selectively forwarding traffic to the appropriate segments.

***Allowable Subject Matter***

4. Claims 8-9 and 16-17 are allowed.

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***Conclusion***

**5. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 305-3988, (for formal communications intended for entry)

**Or:**

(703) 305-3988 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121  
Crystal Drive, Arlington, VA. 22202, Sixth Floor (Receptionist).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamal A. Fox whose telephone number is (703) 305-5741. The examiner can normally be reached on Monday-Friday 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (703) 305-4366. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

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J.A.F.

**Jamal A. Fox**

  
WELLINGTON CHIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600